

CLAIMS

I claim:

1. A bearing assembly comprising:

a split cylindrical adapter sleeve for wrapping around a shaft, said sleeve having a radially outwardly facing surface including a radially outwardly opening circumferential groove formed at one axial end of said sleeve and a tapered section extending from said circumferential groove toward an opposing axial end of said sleeve, said tapered section
5 having a first diameter proximal said circumferential groove which is greater than a second diameter proximal said opposing axial end of said sleeve;

an inner ring encircling said adapter sleeve and having a radially inwardly facing surface between axial ends of said inner ring engaging said tapered section of said adapter
10 sleeve, said inner ring including inner threads formed in said radially inwardly facing surface proximal one of said axial ends of said inner ring; and

a lock nut encircling the shaft and having a radially inwardly depending hook engaging said circumferential groove, and having a radially outwardly facing surface including outer threads threadably engaging said inner threads formed in said radially
15 inwardly facing surface of said inner ring, wherein rotation of said lock nut in one direction of rotation draws said inner ring over said adapter sleeve to compress said adapter sleeve and fix said inner bearing ring relative to the shaft, and rotation of said lock nut in a second direction urges said inner ring off of said adapter sleeve to allow expansion of the adapter sleeve and release said inner bearing ring relative to the shaft.

2. The bearing assembly, as in claim 1, in which said radially inwardly facing surface of said inner ring defines a tapered bore that mates with said tapered section of said adapter sleeve.

3. The bearing assembly, as in claim 1, in which said inner threads of said inner ring extend axially past said circumferential groove.

4. The bearing assembly as in claim 1, including an outer ring radially spaced from said inner ring, said inner and outer rings sandwiching a plurality of rollers therebetween.

5. The bearing assembly as in claim 1, in which locking structure locks said lock nut relative to said inner ring to prevent unintended rotation of said lock nut relative to said inner ring.

6. The bearing assembly as in claim 5, in which said locking structure includes a lock washer interposed between said lock nut and said inner ring.

7. The bearing assembly as in claim 5, in which said locking structure includes a set screw threadably engaging at least one of said inner ring and said lock nut and impinging upon the other of said inner ring and said lock nut.

8. A bearing assembly comprising:

a split cylindrical adapter sleeve for wrapping around a shaft, said sleeve having a radially outwardly facing surface including a tapered section;

a threaded inner ring encircling said adapter sleeve, and including a radially inwardly facing surface engaging said tapered section of said adapter sleeve; and

a lock nut fixed axially relative to said adapter sleeve and threadably engaging said inner ring, wherein rotation of said lock nut in one direction of rotation draws said inner ring over said adapter sleeve to compress said adapter sleeve and fix said inner bearing ring relative to the shaft, and rotation of said lock nut in a second direction urges said inner ring off of said adapter sleeve to allow expansion of said adapter sleeve and release said inner bearing ring relative to the shaft.

9. The bearing assembly, as in claim 8, in which said radially inwardly facing surface of said inner ring defines a tapered bore that mates with said tapered section of said adapter sleeve.

10. The bearing assembly, as in claim 8, in which said inner threads of said inner ring extend axially past said circumferential groove.

11. The bearing assembly as in claim 8, including an outer ring radially spaced from said inner ring, said inner and outer rings sandwiching a plurality of rollers therebetween.

12. The bearing assembly as in claim 8, in which locking structure locks said lock nut relative to said inner ring to prevent unintended rotation of said lock nut relative to said inner ring.

13. The bearing assembly as in claim 12, in which said locking structure includes a lock washer interposed between said lock nut and said inner ring.

14. The bearing assembly as in claim 12, in which said locking structure includes a set screw threadably engaging at least one of said inner ring and said lock nut and impinging upon the other of said inner ring and said lock nut.

15. The bearing assembly as in claim 8, in which said threaded inner ring includes internal threads formed in said radially inwardly facing surface which threadably engage external threads formed in a radially outwardly facing surface of said lock nut.

16. The bearing assembly as in claim 8, in which said lock nut is fixed axially relative to said adapter sleeve by a hook extending from one of said adapter sleeve and said lock nut that engages a circumferential groove formed in the other of said adapter sleeve and said lock nut.

17. A bearing assembly comprising:

a split cylindrical adapter sleeve for wrapping around a shaft, said sleeve having a radially outwardly facing surface including a radially outwardly opening circumferential groove formed at one axial end of said sleeve and a tapered section extending from said circumferential groove toward an opposing axial end of said sleeve, said tapered section
5 having a first diameter proximal said circumferential groove which is greater than a second diameter proximal said opposing axial end of said sleeve;

an inner ring encircling said adapter sleeve and having a radially inwardly facing surface between axial ends of said inner ring, said radially inwardly facing surface of said inner ring defining a tapered bore mating with said tapered section of said adapter sleeve,
10 said inner ring including inner threads formed in said radially inwardly facing surface proximal one of said axial ends of said inner ring;

an outer ring radially spaced from said inner ring;

a plurality of rollers interposed between said inner and outer rings;

15 a lock nut encircling the shaft and having a radially inwardly depending lip engaging said circumferential groove, and having a radially outwardly facing surface including outer threads threadably engaging said inner threads formed in said radially

inwardly facing surface of said inner ring, wherein rotation of said lock nut in one direction of rotation draws said inner ring over said adapter sleeve to compress said adapter sleeve and fix said inner bearing ring relative to the shaft, and rotation of said
20 lock nut in a second direction urges said inner ring off of said adapter sleeve to allow expansion of the adapter sleeve and release said inner bearing ring relative to the shaft; and

locking structure engaging said lock nut and said inner ring which locks said lock
25 nut relative to said inner ring to prevent unintended rotation of said lock nut relative to said inner ring.

18. The bearing assembly, as in claim 17, in which said inner threads of said inner ring extend axially past said circumferential groove.

19. The bearing assembly as in claim 17, in which said locking structure includes a lock washer interposed between said lock nut and said inner ring.

20. The bearing assembly as in claim 17, in which said locking structure includes a set screw threadably engaging at least one of said inner ring and said lock nut and impinging upon the other of said inner ring and said lock nut.